



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/763,092	02/16/2001	Iwao Miyajima	AKI-C052	2721

7590 12/13/2005
George A. Loud, Esquire
BACON & THOMAS
Fourth Floor
625 Slaters Lane
Alexandria, VA 22314-1176

EXAMINER

WINNER, TONY H

ART UNIT PAPER NUMBER

3611

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/763,092

Applicant(s)

MIYAJIMA, IWAO

Examiner

Tony H. Winner

Art Unit

3611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-17, 28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-17, 28 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Acknowledgment

1. Receipt of the amendment filed 9/7/05 has been acknowledged and entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 14, 15, and 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 28, the recitation "gum-base particles" is unclear and failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The specification discloses the "gum base" as a "cross-linked". In the chemical art, cross-linked is often referred to as Thermoset which is a common ground up additive in the polymer field and the term "gum base" generally refers to a natural resin material. The specification (page 10 lines 1-9) does not disclosure the "gum base" comprising of any known resin material and therefore, renders the claim indefinite.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 29 is finally rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. The originally filed specification does not support the new recitations that the urethane foam has a density in various ranges from 0.010g/cm³ to 0.500g/cm³. The original specification does not provide any units for the density ranges as disclosed at pages 4 and 5. Consequently appellant may not now urge that these density ranges are the patentable feature of the invention (as argued in the amendment filed August 13, 2002).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14, 15 and 28 (as best understood) are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Yamagiwa ('677) in view of the Japan 106,390 reference (JP '390) and further in view of Scherzer et al. (US. patent 6,329,440 B2).

Yamagiwa discloses a two-wheeled motor vehicle wherein a hollow portion of the frame is filled with an acoustic material or a damping material (col. 6, line 26) such as polyurethane foam (col. 6, line 53). The foam may be introduced at a threaded opening (col. 6, lines 32 and 63). The foam is foamed after it is poured into the frame.

Yamagiwa does not specifically disclose that the foam is introduced into the swing arm section of the vehicle frame. However, JP 1390 teaches a swing arm which

Art Unit: 3611

is filled with a vibration suppressing material such as gum, sponge or the like (abstract translation). It would have been obvious to modify Yamagiwa by including the foam in the swing arm section of the frame since both Ynmagiwa and JP 1390 teach the desirability of adding a damping or vibration suppressing material in a hollow section of a motorcycle frame, and JP '390 specifically teaches the inclusion of such a material in a swing arm to suppress vibrations.

Regarding the recitation of "gum-based particles" (claim 28), it is noted that the term "gum" as translated is considered to be a very broad term and is considered to cover a wide category of materials. Yamagiwa discloses the use of foams including various additives, while JP'390 specifically discloses the use of "vibration suppressing material, such as Rum, sponge or the like" (Abstract translation, emphasis added). At page 9 of the translation of the JP 1390 reference it is disclosed that various materials can be used as long as they have a vibration suppression effect (including a sound absorption effect), and the material can be selected form a wide range, such as rubber-shaped elastic body, viscoelastic body, sponge, or plastic foaming body" (emphasis added). Nevertheless, Yamagiwa and JP 1390 do not specifically disclose the use of gum in the urethane foam. Scherzer, however, discloses a process for preparation of polyisocyanate polyaddition products, wherein the Crosslinked or gum-based particle is mixed with polyurethane foam (col 5 lines 40-43) for strengthening the polyurethane foam and injected into a hollow body.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination by including the crosslinked/gum based

Art Unit: 3611

particle, as taught by Scherzer, since this is useful in the preparation of the polyurethane foams (col 5 lines 40-43).

Yamagiwa as modified by JP'390 and Scherzer discloses that the foam may be introduced at a threaded opening (col. 6, lines 32 and 63), but does not specifically disclose that the threaded opening is the opening by which the swing arm is mounted to the vehicle (claim 14).

However, since Yamagiwa discloses the introduction of the foam through a threaded opening, to select the mounting opening would have been an obvious design expedient. Yamagiwa also discloses that the use of random holes to fill the frame (col. 20, lines 55-60) is convenient. Thus, it would have been an obvious design expedient to introduce the foam through an opening at the end of the arm portion (claim 15). Moreover, it is noted that JP '390 inserts the damping material through an opening at the end of the arm portion as shown in fig. 1.

5. Claim 29 is finally rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Yamagiwa as modified by JP '390 and Scherzer as applied to claims 14, 15 and 28 above, and further in view of Lindewall.

Regarding the claimed density ranges, these broad ranges appear to be inherent in expanded foam of the type disclosed by Yamagiwa. In the supplemental response filed August 13, 2002, applicant provides abstracts of numerous Japanese Kokai Publications, and states that they are "representative of countless technical publications". These publications seem to establish that urethane foams generally have a density within the broad claimed ranges. Nevertheless, Yamagiwa as modified by JP

Art Unit: 3611

'390 and Scherzer specifically discloses the claimed density. Lindewall, however, discloses a structural urethane foam having a density that falls within the claimed ranges (col. 3, lines 23 and 24). It would have been obvious to modify the combination by using a foam having the claimed density, as taught by Lindewall since commercially available structural foams commonly have such a density.

6. Claims 16 and 17 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Yamagiwa, JP'390 and Scherzer as applied to claims 14, 15 and 28 above, and further in view of the Japan 205119 reference (JP'119).

As set forth above, the combination teaches substantially all that is claimed, but does not teach the use of a mesh sheet (claim 16). JP'119, however, discloses a filling method of a foaming body including the use of a "net type bag body 16" (abstract translation) to retain the "styrene acrylonitrile" (abstract translation) foam as shown in fig. 1. It would have been obvious to use a mesh sheet, or "net type body bag" as taught by JP'119, to retain the material before it is foamed.

Response to Arguments

7. Applicant arguments filed 9/7/05 have been fully considered but they are not persuasive.

The following are the applicants' arguments listed in alphabetical order.

a. With regard to the 35 USC 112, 2nd rejection, applicant believes that the term "Gum base" is clear and definite because it generally refers to a natural resin material in

Art Unit: 3611

view of one skilled in the art. In the previous office action, the office has made the above statement that the "Gum base is generally refers to a natural resin material." Therefore, the question is not weather or not that "Gum base" is generally a resin material but what is the applicant trying to claim. Since the recitation (Gum base) is read in light of the specification (page 10 lines 1-9) that Gum base is essentially the same as "cross-linked", which they are not. Based on that, the claim is infinite. To overcome the rejection, the office suggests the word "cross-linked" be removed from the specification so that the recitation "Gum base" really means "Gum base" and not that it could be "cross-linked".

b. With regard to the 35 USC 112, 1st rejection, applicant believes that "those skilled in the art would recognize that applicant's teachings of density are in such units because the density of resin foam is conventionally, in modern practice, given in units of (g/cm³)". To further support this argument, applicant has provided other references where the units are expressed in terms of g/cm³. The office, however, attests that such believe/evidence is not conclusive that the units, in modern practice, be expressed in g/cm³.

c. With regard to the rejection of claims 14, 15, and 28 for obviousness using combination of Yamagiwa, JP'390, and Scherzer, applicant's arguments are based on the notion of claims rejection on "Gum base" material. Contrary to the argument, the 35 USC 103 rejection (as best understood or read in light of the specification) is based on the cross-linked compound or particle. Such a support and motivation for combine for

Art Unit: 3611

the cross-linked is clearly shown in Scherzer on column 3 lines 1-15, column 5 lines 40-43, and column 10 lines 51-65.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Anthony H. Winner whose telephone number is (571) 272-6654. The examiner can normally be reached on Monday-Friday from 9:30 am to 6:30 pm. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-6584.


TONY WINNER
PATENT EXAMINER
12/8/05